

WHAT IS CLAIMED IS:

1. A portable information device comprising:

initialization data transmitting means for transmitting initialization data to an access point connected to a home network networking home appliances;

response data receiving means for receiving response data responsive to said initialization data from said access point; and

operational information transmitting means for transmitting information used to operate a home appliance connected to said home network after said response data receiving means receive said response data.

2. A portable information device according to Claim 1, wherein said operational information transmitting means transmit identity information used to identify the home appliance.

3. An access device connected to a home network and serving as an access point to permit an access to said home network from a portable information device, comprising:

a network interface for accessing a home network of home appliances to communicate with each of said home appliances;

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a portable information device interface for communicating with said portable information device; and

control means for doing a negotiation with said portable information device via said portable information device interface,

whereby data are transmitted between said portable information device and each of said home appliances through said portable information device interface and said network interface after the negotiation by the control means.

4. An access device according to Claim 3, wherein said control means determine whether the data received from said portable information device interface are valid and further determine, when the data are valid, whether the data are an initialization packet, followed by creation of a new initialization packet when the data are an initialization packet, and outputting of the new initialization packet to said portable information device interface.

5. An access device according to Claim 3, wherein said control means analyzes data received from said portable information device and delivers the data to said network interface after a protocol conversion.

6. An access device according to Claim 3, wherein said

control means determine whether data received from said network interface are valid for accessing said portable information device, creating a transfer packet and outputting the transfer packet to said portable information device interface when the data are valid.

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7. A home network system comprising;  
a home network for networking a plurality of home appliances;  
a portable information device connectable to said home network in a wireless manner; and  
an access point for reciprocal data communication between said home appliances connected to said home network and said portable information device,  
wherein said portable information device does negotiation to be served by said access point.

8. A home network system according to Claim 7, wherein said portable information device transmits to said access point the data used to select a home appliance from among a plurality of said home appliances after said negotiation.

9. A method for accessing a home network networking a plurality of home appliances, comprising:  
receiving from a portable wireless information device a

request for accessing said home network;

recognizing, upon receipt of the request for access, an address for designating a home appliance with which said portable wireless information device will communicate; and

enabling exchange of data between the home appliance designated by recognized said address and said portable wireless information device.

10. A method for accessing a home network networking a plurality of home appliances, comprising:

transmitting a request for accessing said home network to an access point connected to said home network;

transmitting address information used to designate a home appliance included in said home network after transmitting the request for access; and

transmitting operational information used to operate said home appliance after transmitting said address information.

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